

REMARKS/ARGUMENTS

Favorable reconsideration of this application is respectfully requested.

The Specification is amended by the present response to correct minor grammatical and idiomatic informalities. The changes made to the specification are deemed to be self-evident from the original disclosure and thus are not deemed to raise any issues of new matter.

Claims 47-59 and 66-104 are pending in this application. Claims 41-46 and 60-65 are canceled by the present response without prejudice, and claims 81-104 are added by the present response. No new matter is believed to be added. Claim 41 was rejected under 35 U.S.C. § 112, second paragraph. Claims 41-80 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. patent 5,402,333 to Cardner.

Addressing first the rejection of claim 41 under 35 U.S.C. § 112, second paragraph, claim 41 is canceled by the present response, but the features therein are now included in amended independent claims 47 and 48. However, the claims as currently written now consistently refer to an “industrial process” to clarify between the “industrial process” and the “at least two unit processes”. The claims as currently written are believed to address all previous rejections under 35 U.S.C. § 112, second paragraph.

Addressing now the rejection of claims 41-80 under 35 U.S.C. § 102(b) as anticipated by Cardner, that rejection is traversed by the present response.

Initially, applicants note claims 41-46 are canceled by the present response and claims 47 and 48 are now rewritten in independent form. Similarly, claims 60-65 are canceled by the present response and claims 66 and 67 are rewritten in an independent form.

The claims as currently written are directed to a computer based method and system for controlling an industrial process that includes at least two processes, such as processes UP1, UP2 in Fig. 2 in the present specification. The industrial process is directly controlled,

with reference to Fig. 2 in the present specification as a non-limiting example, by a control model 1 that includes one or more algorithms. Process data, for example from sensors 2-8, is delivered to the control model 1.

Further, an automatic diagnosis of the validity of the process data retrieved from the industrial process, such as from sensors 2-8, is executed to prevent irrelevant process data from being used as an input in the control model 1. In Fig. 2 in the present specification the elements 14-19 set forth a control to determine whether the process data retrieved from the industrial process, such as from sensors 2-8, is valid and should be provided to the control model 1.

Each of the independent claims 47, 48, 66, and 67 as currently written provides details as to how that automatic diagnosis of the process data is realized, which are believed to distinguish over the applied art.

With respect to the features recited in claims 47, 48, 66, and 67, which are now rewritten as independent claims, the outstanding Office Action states:

The steps for simulating and optimizing of the processes is taught in the “calibration” discussion at column 10, beginning at line 40, as per instant claims 46-48 and 65-67.¹

Applicants respectfully submit the above-noted basis for the outstanding rejection misconstrues the features in claims 46, 47, 66, and 67. Those claims are directed to specific operations as to how an automatic diagnosis of the validity of the process data retrieved from the industrial process, for example from sensors therein, is realized. The “calibration” operation in Cardner is not directed to that feature.

In that respect applicants also note the operation of “executing an automatic diagnosis of the validity of the process data retrieved from the industrial process...” was noted as met

¹ Office Action of July 25, 2005, page 3, lines 14-16.

by the “flow data reconciliation” process in Cardner.² Claims 47, 48, 66, and 67 set forth specifics of that operation. In Cardner the “calibration” does not set forth specifics of the “flow data reconciliation” process, and on that basis the outstanding rejection appears to be misconstruing the claimed features relative to the disclosure in Cardner.

Moreover, the “calibration” operation in Cardner is directed to allowing adjustments to be made to the models 110, model estimates 117, and the alignment system 316. None of those elements in Cardner has any relevance whatsoever to being able to execute an automatic diagnosis of the validity of process data retrieved from the industrial process. In Cardner the validity check 130 checks the inputs from sensor measurement signals 109 to detect gross errors therein and whether default values should be substituted.³ The “calibration” operation in Cardner is not directed to any control of the validity check 130 operation.

In contrast to Cardner, claims 47, 48, 66, and 67 now provide specific details as to how the automatic diagnosis is executed, which features are believed to be neither taught nor suggested by any disclosure in Cardner.

In view of these foregoing comments, applicants respectfully submit now independent claims 47, 48, 66, and 67 patentably distinguish over Cardner. Each of the other claims pending in this application, including newly added claims 81-104, depend from one of independent claims 47, 48, 66, and 67, and thus are also believed to be allowable.

² Office Action of July 25, 2005, page 3, lines 8-10.

³ Cardner at col. 7, lines 36-41.

In view of these foregoing comments, applicants respectfully submit the present application is in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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